

REVIEWS OF BOOKS

I. PRINCIPLES OF SURGERY. By N. Senn, M.D., Ph. D. (Milwaukee, Wis.) Roy. octavo, pp. 611. Philadelphia and London, F. A. Davis, Publisher, 1890. St. Louis, J. H. Chambers & Co.

The development of surgical pathology, the growth of bacteriology, and the unwonted activity in the study of the etiology of surgical diseases during recent years has so transformed the principles of surgery as to leave in a state of benighted ignorance the student of twenty years ago, who has not kept pace with later advances. In this book Dr. Senn has collected into available form the results of the labors of the most advanced pathologists. That a large portion of his space is given to the German school goes without saying, for the pathologists of that nation are in the lead to-day; but the work of all schools has been carefully collated, and the result is a treatise, singularly judicious and moderate, although withal suitably dogmatic in tone.

The book naturally groups itself into five principal parts; the first is occupied by a discussion of regeneration and inflammation, the second considers pathogenic bacteria, necrosis and suppuration; a third group includes septicæmia, pyæmia, erysipelas, tetanus and hydrophobia; a fourth part is concerned with tuberculosis in its surgical aspects, and the remainder of the work comprehends actinomycosis, anthrax and glanders. The space required for the consideration of the very important subject of tumors being so large, and the work having already become so voluminous, the author decided to reserve his discussion of them for a separate book; his decision in this respect is to be regretted since the omission not only mars the symmetry of the work, but renders its title misleading.

The author's treatment of the first group is noteworthy on account of his discardal of the theory of immediate union of wounds, substituting for it the idea that a certain amount of coagulative necrosis takes place in every wound, and the material thus formed serves as a cement substance which temporarily glues the parts together. * * * This mechanical union, the result of destructive chemical changes in the extravasated blood, is the form of union which has been wrongly interpreted and described as immediate union."

Regeneration of tissues is comprehensively considered, an excellent account of Thiersch's method of transplantation of skin being included in two chapters on the subject.

The central feature of the book is the micro-organism, although, as many playwrights do not formally introduce their hero until the second act, the author retains the introduction of microbes until the second of our groups, which opens with a chapter (Chap. V.) on "pathogenic bacteria." The culture of bacteria is succinctly presented in an eminently useful manner. For the benefit of the busy practitioner, who lacks the time and opportunity for the preparation of the culture media used in laboratories, he describes the substitution of sterilized potato or bread-paste media, which are readily prepared with the appliances which should be in every physician's office.

With regard to the mooted question of the existence of pathogenic microbes in the healthy body, Dr. Senn believes that they "may and do exist * * * without necessarily giving rise to disease, especially if, as is well known, they are constantly being eliminated through the excretory organs," and that the "conditions, then, upon which depend the preservation of health in the event of the entrance of pathogenic microbes into the body, are: 1. The number of microbes introduced 2. Absence of a *locus minoris resistentiae*. 3. Active elimination through the excretory organs."

Microbic disease, he remarks, is transmitted from parents to unborn children; both clinical observation and experimental research leaving no room for doubt that in some infectious diseases, at least, heredity is traceable to direct transmission of the specific microbes, either by means of transportation by the spermatozoa to the ovum, or by their

entrance through the thin wall which separates the maternal from the foetal circulation.

Agreeing with the tendency of the day, he abandons the old restriction of the word "necrosis" to the death of bone only, and extends as well to soft parts where the dead structures do not undergo putrefaction.

The presentation of the microbic origin of suppuration is remarkable for clearness and definiteness of statement, as well as for the thoroughness with which essentials have been separated from accessory details. Clinical observation and experimentation during the last twenty years has well established the fact that pus-microbes are the immediate and essential cause of suppurative inflammation and pus formation, and that these results can be avoided by measures which are calculated to remove, destroy or exclude pathogenic micro-organisms. The staphylococci pyogenes aureus, albus and atreus, the staphylococci cereus, albus and flavus, the staphylococcus flavescentis, the micrococcus pyogenes tenuis, the streptococcus pyogenes, the bacillus pyogenes foetidus and the bacillus pyocyanus are described and illustrated, and their relation to ptomaines considered.

In connection with suppuration in bone, he remarks that when primary it begins in the medullary tissue; "hence it is not correct to speak of a suppurative ostitis, as is so frequently the case among English and American authors. Primary suppurative periostitis is an exceedingly rare affection; consequently *osteomyelitis* must be considered as the most frequent of all inflammatory diseases of bone." He is a strong believer in early operation in the latter malady, considering that while it would be a serious and unjustifiable mistake to open a healthy medullary cavity, it would also be next to criminal negligence to wait for fluctuation before resorting to operative treatment in a case of acute osteomyelitis.

In cases of suspected cerebral suppuration, he recommends the use of the exploring needle for finally deciding the location of the pus focus, considering the procedure absolutely free from danger. A case in which the writer saw exudation of blood and resulting fatal compression follow the accidental puncture of a cerebral vessel, while using an

exploring needle, as Dr. Senn advises, has caused him to believe that exploration should be conducted with more caution than has been the custom.

Septicæmia is considered to represent a febrile condition brought about by the absorption from a local focus of different toxines from as many different microbes. The author discriminates between septic intoxication and septic infection, attributing the former to the absorption of a pre-formed ferment or toxine, which produces the maximum result as soon as it reaches the circulation; and the symptoms subside with the arrest of further supply and the elimination of the septic material from the circulation; septic infection, however, is due to the introduction into the circulation of living micro-organisms which multiply with great rapidity in the blood, a circumstance which imparts a progressive character to this form of septicæmia.

He considers the identity of the tetanus of lower animals with that of man firmly established by Koch's demonstration of the identity of their micro-organisms; inoculation experiments have added still greater weight in favor of this opinion. Hydrophobia he places in the same category, attributing it to an as yet undiscovered microbe.

Tuberculosis in its surgical aspect receives here by far the most complete consideration that has yet come under our observation. The bacillus tuberculosis is fully described and its habits and characters rehearsed. The clinical forms are exhaustively considered, comprising tubercular abscess, tuberculosis of the internal ear, the iris and the skin, in connection with the latter bringing out fully the tubercular character of lupus. Tuberculous infection of the lymphatic glands and peritoneum, of the bones and joints, of tendon sheaths, fascia, the mouth, the breast, the bowels and the genito-urinary organs is gone over in detail.

Dr. Senn's brilliant and incisive style is too well known to readers of modern surgical literature to demand especial notice here. The present work affords a superb illustration of his art of clear presentation. Conclusions are made still more conspicuous by the use of italics. The book is a notable example of the careful, painstaking work which we expect from its author, and of which he so clearly expresses his

opinion when applied to operative surgery: "Brilliant surgeons are not always the best surgeons. The best results in surgery follow the one who is most painstaking in following out the minutest details.

JAMES E. PILCHER.

A GUIDE TO THE INSTRUMENTS AND APPLIANCES REQUIRED IN VARIOUS OPERATIONS. By A. W. MAYO ROBSON, F.R.C.S., England. Surgeon to the Leeds Infirmary, Lecturer on Practical Surgery at the Yorkshire College, etc. London, J. & A. Churchill. St. Louis, Mo., J. H. Chambers & Co., 914 Locust Street.

The type of a certain class of misadventures to which the surgeon is liable is to find in the middle of performing an amputation far away from home that the saw has been forgotten. But there are many misfortunes less than this from which he will be protected who makes use of the admirably and accurately made lists of Mr. Mayo Robson. By personal experience we have found them very reliable. They are compiled by a practical man well versed in antiseptics. The book is small, and easily carried in the pocket if required.

C. B. KEETLEY.

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